

PLATE 271. *TARAXACUM CERATOPHORUM* (Led.) DC.: FIGS. 1 and 2, small plant and individual head, to show characteristic involucre, $\times 1$, from Gargamelle Cove, Newfoundland, *Fernald, Long & Fogg*, no. 7172; FIG. 3, achene with beak and pappus, $\times 1$, from no. 7172; FIG. 4, achene, $\times 10$, from no. 7172. *T. AMBIGENS* Fern.: FIG. 5, small leaf, $\times 1$, from the TYPE, Port au Choix, *Fernald, Long & Fogg*, no. 2167; FIG. 6, head, with characteristic reflexing outer bracts, $\times 1$, from the TYPE; FIG. 7, achene with beak and pappus, $\times 1$, from the TYPE; FIG. 8, achene, $\times 10$, from the TYPE. *T. AMBIGENS*, var. *FULTIUS* Fern.: FIG. 9, head, showing appressed outer involucre, $\times 1$, from the TYPE, Gargamelle Cove, Newfoundland, *Fernald, Long & Fogg*, no. 2163. *T. LAPPONICUM* Kihlm.: FIG. 10, characteristic achene, $\times 10$, from Sandy (Poverty) Cove, Straits of Belle Isle, Newfoundland, *Fernald, Long & Dunbar*, no. 27,174.

PLATE 272. *TARAXACUM PHYMATOCARPUM* Vahl.: FIG. 1, plant, $\times 1$, from Sewall Harbor, lat. $78^{\circ} 30'$, western Greenland, *Ralph Robinson*, no. 40; FIG. 2, achene (dark) with characteristic short beak, $\times 1$, from Netiuleme, Whale Sound, Greenland, *Wetherell*, no. 175, in part; FIG. 3, achene, $\times 10$, from no. 175. *T. LYRATUM* (Led.) DC.: FIG. 4, achene, $\times 10$, from high alpine region, Colorado, *Hall & Harbour*. *T. LAURENTIANUM* Fern.: FIG. 5, leaf, $\times 1$, from the TYPE, base of Ha-Ha Mountain, Ha-Ha Bay, Newfoundland, *Fernald, Wiegand, Long, Gilbert & Hotchkiss*, no. 29,245; FIGS. 6 and 7, heads, showing characteristic involucre, $\times 1$, from the TYPE; FIG. 8, achene, with the long beak and long pappus, $\times 1$, from the TYPE; FIG. 9, achene, $\times 10$, from the TYPE. *T. DUMETORUM* Greene: FIG. 10, achene, $\times 10$, from Medicine Hat, Alberta, June 8, 1894, *John Macoun*.

PLATE 273. *TARAXACUM LONGII* Fern.: FIG. 1, leaf, $\times 1$, from Grand River, Gaspé Co., Quebec, June 30–July 3, 1904, *Fernald*; FIG. 2, head, showing characteristic involucre, $\times 1$, from the TYPE, base of Ha-Ha Mountain, Ha-Ha Bay, Newfoundland, *Fernald, Wiegand, Long, Gilbert & Hotchkiss*, no. 29,244; FIG. 3, achene, with beak and pappus, $\times 1$, from TYPE; FIG. 4, achene, $\times 10$, from TYPE. *T. LATILOBUM* DC.: FIG. 5, achene, $\times 10$, from Old Port au Choix, Newfoundland, *Fernald, Long & Fogg*, no. 2159. *T. TORNGATENSE* Fern.: FIG. 6, leaf, $\times 1$, from the TYPE, Head of Nachvak Bay, Labrador, *Woodworth*, no. 443; FIG. 7, head from TYPE; FIG. 8, achene, with comparatively short beak, and pappus, $\times 1$, from TYPE; FIG. 9, achene, $\times 10$, from TYPE.

BRANCHING *POLYGONATUM PUBESCENS*

M. L. FERNALD AND S. K. HARRIS

ON May 21, 1933, while returning from a field-trip in Vermont with a class of Radcliffe students, we stopped in the wooded area of Ashby in northern Middlesex County, Massachusetts to examine some shrubs which had caused discussion. Stepping from the automobile to the edge of the recently surfaced road we were surprised to find ourselves in a colony of liliaceous plants which, at first, were unrecognized. Examination showed that these were an aberrant form of the common Solomon's Seal of northeastern America, *Polygonatum pubescens* (Willd.) Pursh, with elongate, spreading or ascending leafy branches replacing the ordinary naked drooping peduncles. So far as we can

find, no such form has been described in America, though in Europe similar forms of *P. multiflorum* (L.). All. have been found at several stations since the first of them was noted in Switzerland prior to 1826.

The first discovered of these European plants was treated as a species, *Convallaria bracteata* Thomas (without diagnosis) in Steudel & Hochstetter, Enum. Pl. Germ. Helv. Prodr. 50 (1826), and (with full description) in Gaudin, Fl. Helv. ii. 531 (1828), but on the preceding page of the latter work it was treated doubtfully as a variety, *C. multiflora*, ? γ . *bracteata* Gaud. l. c. 530 (1828), based in part (as to name) upon *C. bracteata* of the next page. This plant, as represented in the Gray Herbarium by a sheet of Thomas' original material from Bex, another collected by Alexander Braun in Baden and by the illustration in Reichenbach's Icones (x. t. ccccxxxiii. fig. 963), has the inflorescences no longer than in ordinary *P. multiflorum* but it differs in having leafy bracts on the pedicels. It was transferred to *Polygonatum* as *P. multiflorum*, γ . *bracteatum* (Thomas) Kunth, Enum. v. 139 (1850).

Another form of *Polygonatum multiflorum* is more comparable with our plant, having the branches elongate and with larger leaves. This was described from Baden as *Convallaria multiflora*, γ . *ramosa* Doell, Fl. Baden, i. 384 (1857) and later transferred to *Polygonatum* as *P. multiflorum*, var. *ramosum* (Doell) Geisenheymer, Deutsche Bot. Monatsschr. xi. 35 (1893).

All these variations appear to be forms rather than true geographic varieties and as such should be called

POLYGONATUM MULTIFLORUM (L.) All., forma **bracteatum** (Thomas), comb. nov. *Convallaria bracteata* Thomas in Steud. & Hochst. Enum. Pl. Germ. Helv. Prodr. 50 (1826), name only, and in Gaud. Fl. Helv. ii. 531 (1828). *C. multiflora*, ? γ . *bracteata* (Thomas) Gaudin, l. c. 530 (1828) at least as to syn. *C. bracteata*. *P. multiflorum*, γ . *bracteatum* (Thomas) Kunth, Enum. v. 139 (1850).

P. MULTIFLORUM, forma **ramosum** (Doell), comb. nov. *Convallaria multiflora*, γ . *ramosa* Doell, Fl. Baden, i. 384 (1857). *P. multiflorum*, var. *ramosum* (Doell) Geisenh. Deutsche Bot. Monatsschr. xi. 35 (1893).

P. PUBESCENS (Willd.) Pursh, forma **fultius**, forma nov. (FIG. 1), pedunculis axillaribus in ramos elongatos adscendentes foliosos mutatis; ramis imis foliis subtendentibus aequantibus vel superantibus, floribus 1-3 subsessilibus in axillis foliorum ramorum.—MASSACHUSETTS: roadside at border of dry woods, Ashby, May 21, 1933, Fernald & Harris, no. 2590 (TYPE in Gray Herb., isotype in herb. New England Bot. Club).

Polygonatum pubescens, forma *fultius* occurred in some quantity (about 20 plants) at the margin of a recently remade road; farther back, in undisturbed woods, the abundant *P. pubescens* was quite typical, in having naked, pendulous, simple or forking peduncles. The inference is at least reasonable that the mishap of road-improvement, occurring at the border of a colony of *P. pubescens*, induced the mutation or sporting of the plants most disturbed.¹ Five living



Fig. 1. *Polygonatum pubescens*, forma *FULTIUS*, $\times \frac{1}{4}$.

plants transferred to the shrubbery of the senior author have grown all summer but, although they flowered freely and held their marcescent perianths for some weeks, they utterly failed to set fruit. For a photograph (FIG. 1) of one of these plants, $\times \frac{1}{4}$, we are indebted to

¹ Such results of injury are often noted. The following, of recent date, is to the point: "OSMUNDA CINNAMOMEA f. FRONDOSA (T. & G.) Britton. . . . Several plants in a small colony with the wet soil around the plants more or less covered with hardened road tar from highway construction close by. Normal spore-bearing fronds were entirely absent, every frond being fertile at the tip only, Since abnormal forms are often associated with certain types of injury or unnatural conditions the presence of the road tar is possibly to be associated with the development of these spore-bearing leafy fronds."—H. D. House, Am. Fern Journ. xxiii. 4, 5 (1933).

Mr. Henry G. Fernald. Other plants given to Dr. Edgar Anderson to grow were not allowed to attempt fruiting.

It is not improbable that *Polygonatum pubescens*, forma *fultius* is a sterile or vegetative mutant. At least, the infertility of its European counterparts has been noted, Geisenheymer specially stating of them: "alle Blüten sind unfruchtbar. In der sehr langen und dünnen Perigonröhre ist keine Spur eines Fruchtknotens zu finden."

GRAY HERBARIUM.

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ERRATA

- Page 1, line 9; *for 271 read 273.*
- " 52, line 5; *for de Pylaie read de la Pylaie.*
- " 66, line 14; *for Staph read Stapf.*
- " 99, line 25; *for probleen read problem.*
- " 166, line 19; *for L'Aigle read l'Aigle.*
- " 186, last line; *for March read April.*
- " 201, line 11; *for ALKA-KENGI read ALKEKENGI.*
- " 208, line 8; *for 1, 2 and a read 3, 4 and 5.*
- " 208, line 14; *for 1 and 2 read 3 and 4.*
- " 208, line 19; *for a read 5.*
- " 209, line 30; *for 3 and b read 1 and 2.*
- " 215, line 26; *for (Torr.) Hitche. read of Nfd. records.*
- No. 414, table of contents; *for 223 read 224.*
- Page 224, lines 2 and 4 from bottom; *for NEOMAMMALLARIA read NEOMAMMILLARIA.*
- " 230, line 31; *omit C. before Hostiana.*
- " 231, line 13; *omit period after Junge.*
- " 258, line 12; *for 1851 read 1857.*
- " 307, line 7, *for other's read others'.*
- " 314, line 3; *omit first parenthesis.*
- Plate 271, opp. page 368, in explanation of plate, line 6; *for FULTIOR read FULTIUS.*
- Page 376, line 30; *for FULTIOR read FULTIUS.*